10/507,303

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	11534	(biosensor or sensor or surface) same (PEG or ethylene adj oxide or polyethylene adj glycol) same polymer$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/10/12 12:07
L2	466	l1 and biosensor$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/10/12 12:08
L3	466	l2 and polymer$1	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/10/12 12:09
L4	466	l3 and (ethylene adj oxide or polyethylene adj glycol or PEG)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/10/12 12:10
L5	126	l4 and (mercapto or $alkoxysilyl or $alkoxysilane)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/10/12 12:21
L6	118	l5 and (gold or silver or copper or aluminium)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2005/10/12 12:20

10/507,303

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTASXH1641

PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * Welcome to STN International * * * * * * * * * *

NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2		"Ask CAS" for self-help around the clock
NEWS	3	JUL 20	Powerful new interactive analysis and visualization software, STN AnaVist, now available
NEWS	4	AUG 11	STN AnaVist workshops to be held in North America
NEWS	5	AUG 30	CA/CAplus -Increased access to 19th century research documents
NEWS	6	AUG 30	CASREACT - Enhanced with displayable reaction conditions
NEWS	7	SEP 09	ACD predicted properties enhanced in REGISTRY/ZREGISTRY
NEWS	8	OCT 03	MATHDI removed from STN
NEWS	9	OCT 04	CA/CAplus-Canadian Intellectual Property Office (CIPO) added to core patent offices
NEWS	10	OCT 06	STN AnaVist workshops to be held in North America

NEWS EXPRESS	JUNE 13 CURRENT WINDOWS VERSION IS V8.0, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 13 JUNE 2005
NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS INTER	General Internet Information
NEWS LOGIN	Welcome Banner and News Items
NEWS PHONE	Direct Dial and Telecommunication Network Access to STN
NEWS WWW	CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:11:22 ON 12 OCT 2005

=>
Uploading
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Do you want to switch to the Registry File?
Choice (Y/n):
Switching to the Registry File...
Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> FILE REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 13:11:35 ON 12 OCT 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES: 11 OCT 2005 HIGHEST RN 865062-68-6
DICTIONARY FILE UPDATES: 11 OCT 2005 HIGHEST RN 865062-68-6

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JULY 14, 2005

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

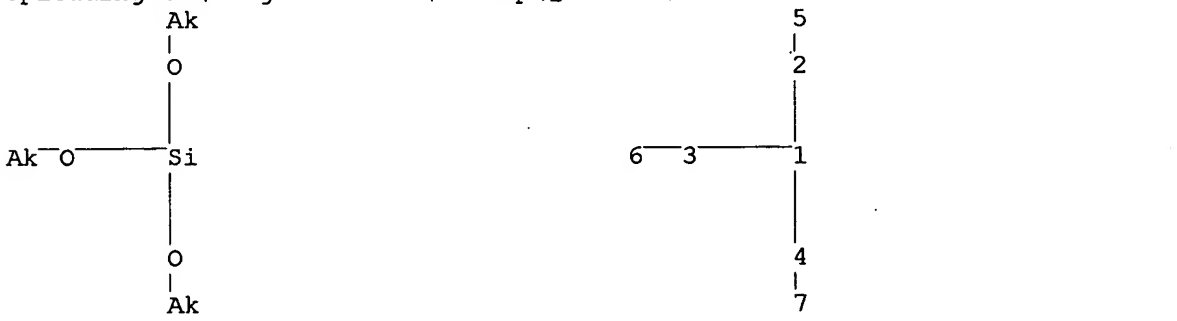
****
* *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
* *
****

Structure search iteration limits have been increased. See HELP SLIMITS
for details.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

=>
Uploading C:\Program Files\Stnexp\Queries\10507303.str



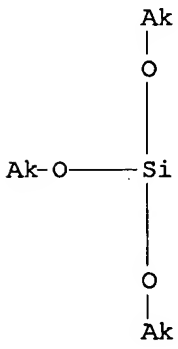
chain nodes :
1 2 3 4 5 6 7
chain bonds :
1-2 1-3 1-4 2-5 3-6 4-7
exact/norm bonds :
2-5 3-6 4-7

exact bonds :
1-2 1-3 1-4

Match level :
1:CLASS 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:CLASS

L1   STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1   STR



Structure attributes must be viewed using STN Express query preparation.

=> s l1
SAMPLE SEARCH INITIATED 13:11:50 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED -   7863 TO ITERATE

 25.4% PROCESSED   2000 ITERATIONS   50 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS: 151945 TO   162575
PROJECTED ANSWERS: 40229 TO   45791

L2   50 SEA SSS SAM L1

=> s l1 sss full
FULL SEARCH INITIATED 13:11:57 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -   155534 TO ITERATE

100.0% PROCESSED   155534 ITERATIONS   42305 ANSWERS
SEARCH TIME: 00.00.03

L3   42305 SEA SSS FUL L1

=> FIL CAPLUS
COST IN U.S. DOLLARS   SINCE FILE   TOTAL
                                                       ENTRY   SESSION
FULL ESTIMATED COST   161.33   161.54

FILE 'CAPLUS' ENTERED AT 13:12:06 ON 12 OCT 2005

FILE COVERS 1907 - 12 Oct 2005 VOL 143 ISS 16
FILE LAST UPDATED: 11 Oct 2005 (20051011/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

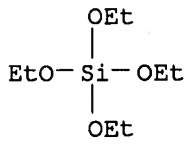
```
=> s l3
L4       83200 L3

=> s l4 and (ethylene glycol or ethylene oxide)
         509403 ETHYLENE
           3341 ETHYLENES
         510868 ETHYLENE
                  (ETHYLENE OR ETHYLENES)
         337388 GLYCOL
          44219 GLYCOLS
         352495 GLYCOL
                  (GLYCOL OR GLYCOLS)
         123197 ETHYLENE GLYCOL
                  (ETHYLENE(W)GLYCOL)
         509403 ETHYLENE
           3341 ETHYLENES
         510868 ETHYLENE
                  (ETHYLENE OR ETHYLENES)
        1595491 OXIDE
         332713 OXIDES
        1690452 OXIDE
                  (OXIDE OR OXIDES)
          66118 ETHYLENE OXIDE
                  (ETHYLENE(W)OXIDE)
L5        2871 L4 AND (ETHYLENE GLYCOL OR ETHYLENE OXIDE)

=> s l5 and ?ethylene glycol
        1039511 ?ETHYLENE
         337388 GLYCOL
          44219 GLYCOLS
         352495 GLYCOL
                  (GLYCOL OR GLYCOLS)
         254778 ?ETHYLENE GLYCOL
                  (?ETHYLENE(W)GLYCOL)
L6        2171 L5 AND ?ETHYLENE GLYCOL

=> s l6 and polymer
        1029028 POLYMER
         847088 POLYMERS
        1392590 POLYMER
```

(POLYMER OR POLYMERS)
L7 1069 L6 AND POLYMER

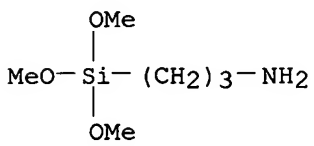
=> s l7 and biosensor
16143 BIOSENSOR
19089 BIOSENSORS
23369 BIOSENSOR
(BIOSENSOR OR BIOSENSORS)
L8 6 L7 AND BIOSENSOR

=> d l8 ibib abs hitstr tot

L8 ANSWER 1 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2005:24974 CAPLUS
DOCUMENT NUMBER: 143:3610
TITLE: Plasma printing: patterned surface functionalisation and coating at atmospheric pressure
AUTHOR(S): Penache, C.; Gessner, C.; Betker, T.; Bartels, V.; Hollaender, A.; Klages, C.-P.
CORPORATE SOURCE: Fraunhofer Institute for Surface Engineering and Thin Films, Braunschweig, D-38108, Germany
SOURCE: IEE Proceedings: Nanobiotechnology (2004), 151(4), 139-144
CODEN: IPNEAY; ISSN: 1478-1581
PUBLISHER: Institution of Electrical Engineers
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A new plasma-based micropatterning technique, here referred to as plasma printing, combines the well-known advantages given by the nonequil. character of a dielec. barrier discharge (DBD) and its operation inside small gas vols. with dimension between tens and hundreds of micrometers. The discharge is run at atmospheric pressure and can be easily implemented for patterned surface treatment with applications in biotechnol. and microtechnol. In this work the local modification of dielec. substrates, e.g. polymeric films, is addressed with respect to coating and chemical functionalization, immobilization of biomols. and area-selective electroless plating.
IT **78-10-4**, Tetraethoxysilane **13822-56-5**, Aminopropyl-trimethoxysilane
RL: RCT (Reactant); RACT (Reactant or reagent)
(plasma printing for patterned surface functionalization and coating at atmospheric pressure for microarrays)
RN 78-10-4 CAPLUS
CN Silicic acid (H4SiO4), tetraethyl ester (8CI, 9CI) (CA INDEX NAME)



RN 13822-56-5 CAPLUS
CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2004:905400 CAPLUS
DOCUMENT NUMBER: 141:362782
TITLE: Modification of silicon-containing scanning probe microscopy tips and growth of oligo-or poly (**ethylene glycol**) films on silicon surfaces through formation of si-c bonds
INVENTOR(S): Cai, Chengzhi; Yam, Chi Ming; Xiao, Zhongdang; Gu, Jianhua
PATENT ASSIGNEE(S): University of Houston, USA
SOURCE: U.S. Pat. Appl. Publ., 47 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

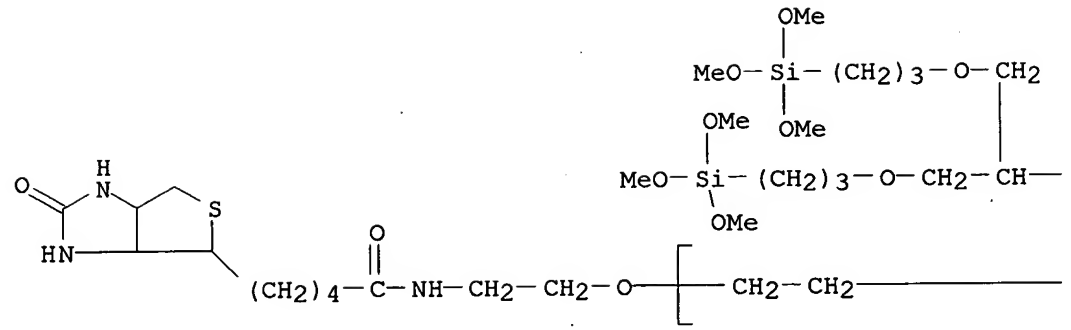
PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
US 2004213910	A1	20041028	US 2003-742047		20031219
PRIORITY APPLN. INFO.:			US 2002-434899P	P	20021220
			US 2003-497148P	P	20030822

AB The present invention provides for a practical method of grafting oligo- and/or poly(ethyleneglycol) (OEG and/or PEG) derivs. onto hydrogen-terminated silicon surfaces, including the surfaces of silicon scanning probe microscopy (SPM) tips, by hydrosilylation of OEG and/or PEG-terminated alkenes. This invention is related to the development of silicon-based bio-devices, including biochips, **biosensors** such as SPM probes, microarrays, micro-fluidic systems, and implantable microdevices. This invention is also a practical method to modify (many) SPM probe tips with OEG/PEG derivs. and to subsequently modify the tip apex with functional single mols. to improve the specificity and resolution of AFM imaging and measurements. The functional mols. include the dendritic adsorbates with a functional group at their focal point and with or without a tripod-shaped framework.

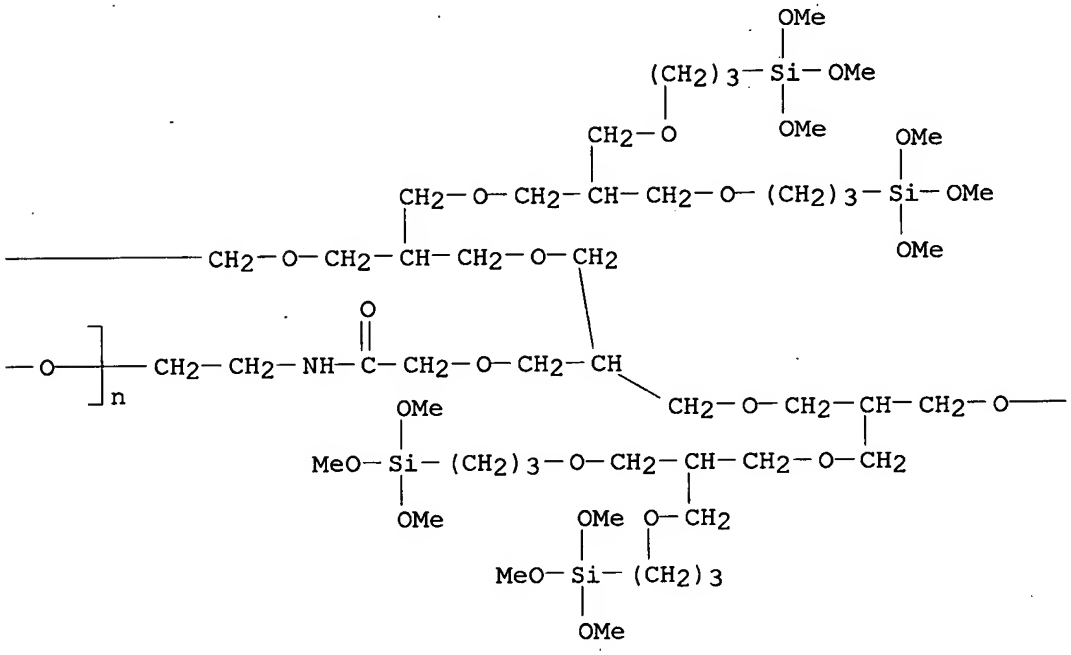
IT **778592-68-0P 778592-69-1P 778592-70-4P**
RL: ARU (Analytical role, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); PROC (Process)
(modification of silicon-containing scanning probe microscopy tips and growth of oligo-or poly (**ethylene glycol**) films on silicon surfaces through formation of si-c bonds)

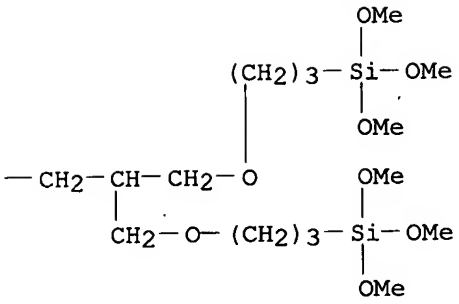
RN 778592-68-0 CAPLUS
CN Poly(oxy-1,2-ethanediyl), α-[12-[10,10-dimethoxy-4-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,11-trioxa-10-siladodec-1-yl]-8-[4-[10,10-dimethoxy-4-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,11-trioxa-10-siladodec-1-yl]-14,14-dimethoxy-8-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,10,15-tetraoxa-14-silahexadec-1-yl]-22,22-dimethoxy-4-oxo-16-[[3-(trimethoxysilyl)propoxy]methyl]-6,10,14,18,23-pentaoxa-3-aza-22-silatetracos-1-yl]-ω-[2-[[5-[(3aS,4S,6aR)-hexahydro-2-oxo-1H-thieno[3,4-d]imidazol-4-yl]-1-oxopentyl]amino]ethoxy]- (9CI) (CA INDEX NAME)

PAGE 1-A



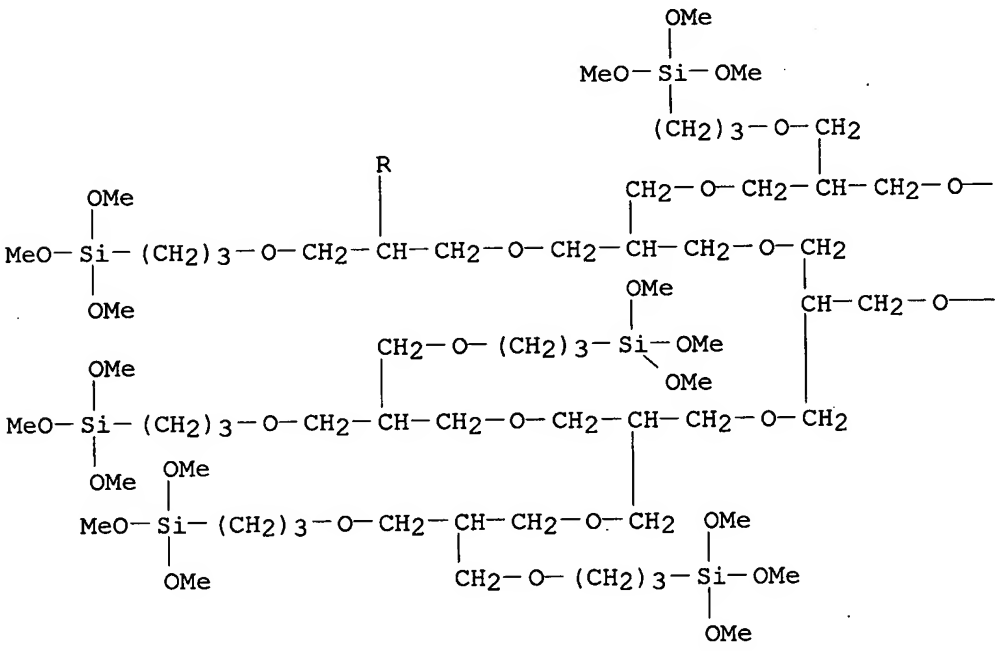
PAGE 1-B



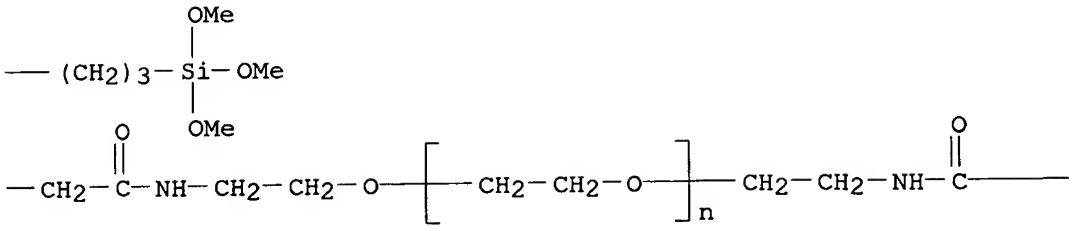


RN 778592-69-1 CAPLUS

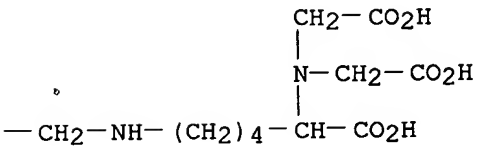
CN Poly(oxy-1,2-ethanediyl), α-[2-[[[[(5S)-5-[bis(carboxymethyl)amino]-5-carboxypentyl]amino]acetyl]amino]ethyl]-ω-[[12-[10,10-dimethoxy-4-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,11-trioxa-10-siladodec-1-yl]-8-[4-[10,10-dimethoxy-4-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,11-trioxa-10-siladodec-1-yl]-14,14-dimethoxy-8-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,10,15-tetraoxa-14-silahexadec-1-yl]-22,22-dimethoxy-4-oxo-16-[[3-(trimethoxysilyl)propoxy]methyl]-6,10,14,18,23-pentaoxa-3-aza-22-silatetracos-1-yl]oxy]- (9CI) (CA INDEX NAME)



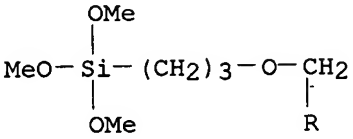
PAGE 1-B



PAGE 1-C



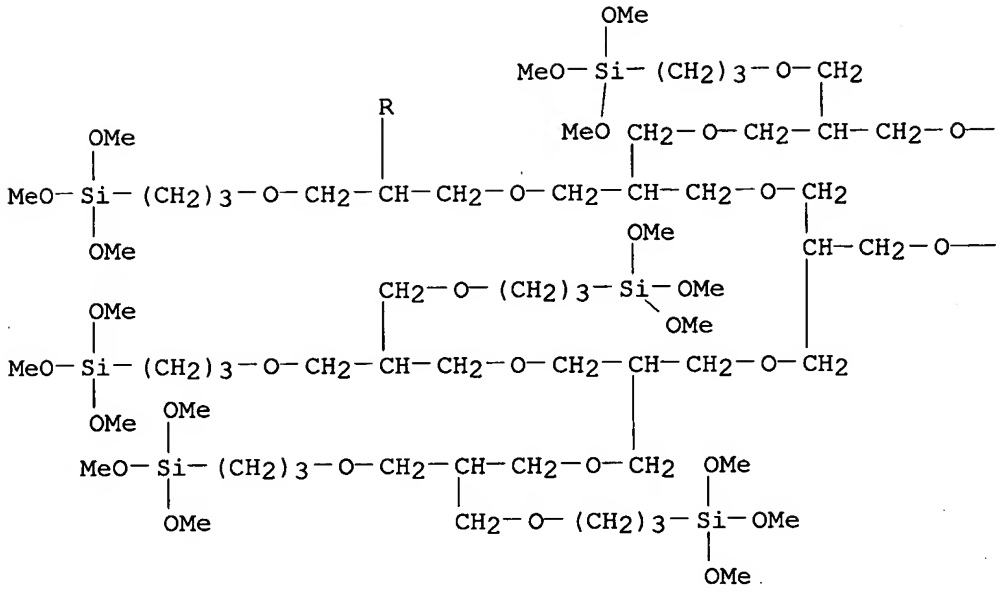
PAGE 2-A



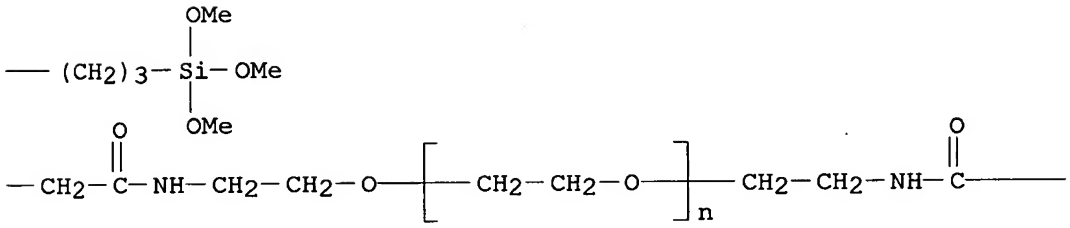
RN 778592-70-4 CAPLUS

CN Poly(oxy-1,2-ethanediyl), α-[2-[[12-(acetylthio)-1-oxododecyl]amino]ethyl]-ω-[[12-[10,10-dimethoxy-4-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,11-trioxa-10-siladodec-1-yl]-8-[4-[10,10-dimethoxy-4-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,11-trioxa-10-siladodec-1-yl]-14,14-dimethoxy-8-[[3-(trimethoxysilyl)propoxy]methyl]-2,6,10,15-tetraoxa-14-silahexadec-1-yl]-22,22-dimethoxy-4-oxo-16-[[3-(trimethoxysilyl)propoxy]methyl]-6,10,14,18,23-pentaoxa-3-aza-22-silatetracos-1-yl]oxy]- (9CI) (CA INDEX NAME)

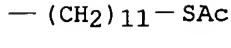
PAGE 1-A

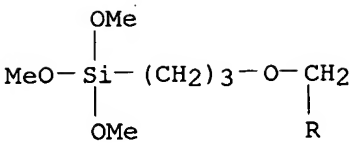


PAGE 1-B



PAGE 1-C

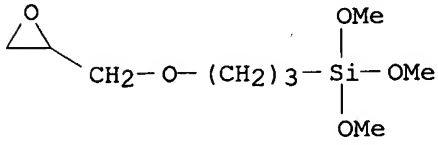




L8 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:853719 CAPLUS
DOCUMENT NUMBER: 134:204482
TITLE: A high-density poly(**ethylene glycol**) **polymer** brush for immobilization on glass-type surfaces
AUTHOR(S): Piehler, J.; Brecht, A.; Valiokas, R.; Liedberg, B.; Gauglitz, G.
CORPORATE SOURCE: Institut fur Physikalische Chemie, Tubingen, D-72076, Germany
SOURCE: Biosensors & Bioelectronics (2000), 15(9-10), 473-481
CODEN: BBIOE4; ISSN: 0956-5663
PUBLISHER: Elsevier Science S.A.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Label-free heterogeneous phase detection critically depends on the properties of the interfacial layer. We have obtained high-d. monomol. poly(**ethylene glycol**) (PEG) layers by solvent-free coupling of homo-bifunctional PEGs (2000 g/mol) at 75° to silica surfaces silanized with glycidyloxipropyltrimethoxysilane (GOPTS). Characterization by ellipsometry and contact angles revealed that PEG layers up to 3.4 ng/mm2 with low roughness and flexibility were obtained. Specific and non-specific binding at these PEG surfaces was monitored by reflectometric interference spectroscopy (RIfS). No significant non-specific adsorption upon incubation of 1 mg/mL ovalbumin was detectable (<10 pg/mm2), and 150 pg/mm2 upon incubation of 10% calf serum, less than 10% of the amount adsorbed to the solely silanized surfaces. The terminal functional groups of the PEG layers were utilized to couple ligands and a protein. Specific protein interaction with these immobilized compds. was detected with saturation loadings in the range of protein monolayers (2-4 ng/mm2). The excellent functional properties, the high stability of the layers, the generic and practical coupling procedure and the versatility for immobilizing compds. of very different functionality make these PEG layers very attractive for application in label-free detection with silica or metal-oxide based transducers.

IT **2530-83-8**, Glycidyloxypropyltrimethoxysilane
RL: NUU (Other use, unclassified); USES (Uses)
(poly(**ethylene glycol**) for glass-type surface **biosensor** immobilization)
RN 2530-83-8 CAPLUS
CN Silane, trimethoxy[3-(oxiranylmethoxy)propyl]- (9CI) (CA INDEX NAME)



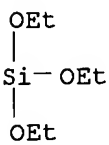
REFERENCE COUNT: 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 2000:786111 CAPLUS
DOCUMENT NUMBER: 134:112589
TITLE: Controlling the Material Properties and Biological Activity of Lipase within Sol-Gel Derived Bioglasses via Organosilane and **Polymer** Doping
AUTHOR(S): Keeling-Tucker, Tracey; Rakic, Michael; Spong, Cassandra; Brennan, John D.
CORPORATE SOURCE: Department of Chemistry, McMaster University, Hamilton, ON, L8S 4M1, Can.
SOURCE: Chemistry of Materials (2000), 12(12), 3695-3704
CODEN: CMATEX; ISSN: 0897-4756
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

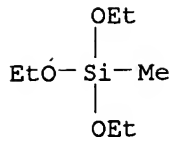
AB The development of optical **biosensors** based on sol-gel entrapped proteins requires a detailed understanding of the evolution of the physicochem. properties of the material, their affects on protein function, and how these factors can be tailored by processing conditions. In this study, the **polymer** additives poly(vinyl alc.) (PVA) and poly(**ethylene glycol**) (PEG) were dispersed into sol-gel processed materials derived from tetra-Et orthosilicate (TEOS) alone or copolymd. with methyltriethoxysilane (MTES) or dimethyldimethoxysilane (DMDMS), and their effects on the chemical and phys. properties of the materials were monitored. In general, the phys. properties, including transmittance and resistance to cracking, improved with increasing PEG concentration, but deteriorated with PVA content. The spectroscopic data obtained from entrapped 7-azaindole and 6-propionyl-2-(dimethylamino)naphthalene suggested that the inclusion of **polymers** and organic moieties into the matrix affected both the homogeneity of the materials and the polarity of the internal environment, with PEG reducing and PVA increasing the internal polarity. In light of these results, preliminary studies were performed on the effects of organic and **polymer** content on the initial and long-term activity of entrapped lipase. Concomitant with the material data, PVA tended to have a detrimental affect on lipase activity, while PEG provided a concentration-dependent enhancement of the enzyme activity. This study demonstrates for the first time that durable, optically transparent materials with significant lipase activity can be prepared and that optimal materials are produced with TEOS as a precursor and a few weight percent of low mol. weight PEG as an additive, with no need for organosilane precursors.

IT **78-10-4**, Tetraethyl orthosilicate **2031-67-6**, Methyltriethoxysilane
RL: PRP (Properties)
(chemical and phys. properties of poly(vinyl alc.) and poly(**ethylene glycol**) in sol-gels derived from tetraethylorthosilicate alone or as copolymers with organosilanes and effects of sol-gels on lipase activity)

RN 78-10-4 CAPLUS
CN Silicic acid (H4SiO4), tetraethyl ester (8CI, 9CI) (CA INDEX NAME)



RN 2031-67-6 CAPLUS
CN Silane, triethoxymethyl- (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1999:487339 CAPLUS
DOCUMENT NUMBER: 131:131814
TITLE: Block **polymer** based preparation of mesostructured inorganic oxide materials for separations and catalyst supports
INVENTOR(S): Stucky, Galen D.; Chmelka, Bradley F.; Zhao, Dongyuan; Melosh, Nick; Huo, Qisheng; Feng, Jianglin; Yang, Peidong; Pine, David; Margolese, David; Lukens, Wayne, Jr.; Fredrickson, Glenn H.; Schmidt-Winkel, Patrick
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: PCT Int. Appl., 140 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9937705	A1	19990729	WO 1998-US26201	19981209
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9937397	A1	19990809	AU 1999-37397	19981209
EP 1037940	A1	20000927	EP 1998-967050	19981209
EP 1037940	B1	20040908		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2003531083	T2	20031021	JP 2000-528617	19981209
AT 275600	E	20040915	AT 1998-967050	19981209
US 6592764	B1	20030715	US 2000-554259	20001211
US 2003205528	A1	20031106	US 2003-426441	20030430
US 2004144726	A1	20040729	US 2004-736462	20040405

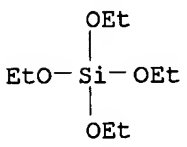
PRIORITY APPLN. INFO.:		
US 1997-69143P	P	19971209
US 1998-97012P	P	19980818
WO 1998-US26201	W	19981209
US 2000-554259	A1	20001211
US 2002-434032P	P	20021217
US 2003-426441	A2	20030430

AB Highly mesoscopically ordered, hydrothermally stable and ultra large pore size metal oxide-block copolymer composites or mesoporous oxide films, fibers, and monoliths are formed using amphiphilic block copolymers which act as structure directing agents for the metal oxide in a self-assembling system. Heating to remove the template yields a mesoporous product that is thermally stable in boiling water. Calcination yields mesoporous oxide structures with high BET surface area. Prepared membranes can be

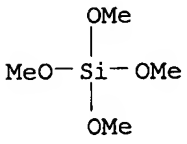
functionalized and used for sepns., catalysis, and sensors. The mesoporous oxides can be used for chromatog. separation of biomols. such as enzymes and proteins. In an example, silica gel was obtained by acid-catalyzed hydrolysis of tetraethoxysilane in EtOH solution The gel was mixed with a solution of a polyethylene oxide-polypropylene oxide-polyethylene oxide triblock copolymer (e.g., Pluronic P123) and inorg. salts (e.g., NaCl) in EtOH and water. Silica membranes (e.g., calcined hexagonal mesoporous SBA-15) were obtained after drying at room temperature, washing with water to remove the salts, and calcination to remove the copolymer.

IT **78-10-4 681-84-5,** Tetramethylorthosilicate
682-01-9, Tetrapropoxysilane
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
(block **polymer** based preparation of mesostructured inorg. oxides for sepns. and catalyst supports)

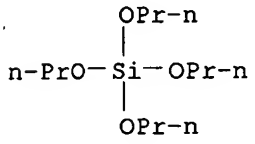
RN 78-10-4 CAPLUS
CN Silicic acid (H4SiO4), tetraethyl ester (8CI, 9CI) (CA INDEX NAME)



RN 681-84-5 CAPLUS
CN Silicic acid (H4SiO4), tetramethyl ester (8CI, 9CI) (CA INDEX NAME)



RN 682-01-9 CAPLUS
CN Silicic acid (H4SiO4), tetrapropyl ester (8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 6 OF 6 CAPLUS COPYRIGHT 2005 ACS on STN
ACCESSION NUMBER: 1998:550523 CAPLUS
DOCUMENT NUMBER: 129:172746
TITLE: Electrochemical analyte sensors using thermostable soybean peroxidase
INVENTOR(S): Heller, Adam; Kenausis, Gregg L.; Chen, Qiang; Vreeke, Mark S.
PATENT ASSIGNEE(S): E. Heller & Company, USA
SOURCE: PCT Int. Appl., 65 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

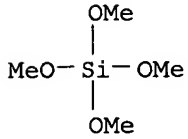
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9835053	A2	19980813	WO 1998-US2403	19980211
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 5972199	A	19991026	US 1997-798596	19970211
AU 9863214	A1	19980826	AU 1998-63214	19980211
EP 977984	A2	20000209	EP 1998-907399	19980211
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001512567	T2	20010821	JP 1998-534954	19980211
PRIORITY APPLN. INFO.:			US 1997-798596 A2	19970211
			US 1995-540789 A2	19951011
			WO 1998-US2403 W	19980211

AB A sensor for the detection and measurement of an analyte in a biofluid includes two enzymes. One type of sensor measures the concentration of hydrogen peroxide using a thermostable peroxidase enzyme that is immobilized in a redox hydrogel to form a sensing layer on a working electrode. This sensor also includes a hydrogen peroxide-generating second enzyme which is insulated from the redox hydrogel and electrode. This second enzyme generates hydrogen peroxide in response to the presence of an analyte or analyte-generated compound The second enzyme may be insulated from the electrode by placement of an elec. insulating layer between the sensing layer and the second enzyme layer. Alternatively, the second enzyme is immobilized in an inorg. polymeric matrix, preferably made using a sol-gel polymerization process. Such matrixes include those made of silica. Often, the second enzyme is stabilized by immobilization in a sol-gel. Further stabilization of polyelectrolytic enzymes can be obtained by immobilizing the enzyme with a polyelectrolytic **polymer** in the sol-gel matrix. Four-layered sensors were prepared on polished and cleaned vitreous carbon electrodes. The first layer had an osmium-containing redox **polymer**, PVP-bpy-Os, and soybean peroxidase, and poly(**ethylene glycol**) diglycidyl ether as crosslinker. The second and fourth layers were cellulose acetate films for limiting transport of hydrogen peroxide and limiting analyte transport, resp. The third layer contained immobilized glucose oxidase or lactate oxidase.

IT **681-84-5**, Tetramethylorthosilicate
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of glucose oxidase- or lactate oxidase-doped silica gel powder; electrochem. analyte sensors using thermostable soybean peroxidase)

RN 681-84-5 CAPLUS
CN Silicic acid (H4SiO4), tetramethyl ester (8CI, 9CI) (CA INDEX NAME)



=> log Y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	47.46	209.00

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-4.38	-4.38

STN INTERNATIONAL LOGOFF AT 13:15:48 ON 12 OCT 2005